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THE UNIVERSITY OF CHICAGO

the
university of illinois
college of engineering
1959 GRADUATES
10 years later
where are they
now?

UNIVERSITY OF CHICAGO
MAY 18 1977



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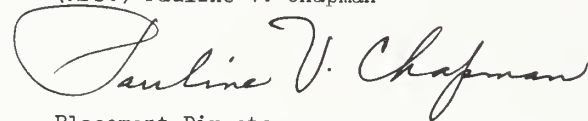
Ten years after graduation from college is an important milestone in the career of an engineer. By that time the uncertainties of the first few years have been reconciled and, in most cases a career pattern has been established.

The information in the following report covers the 1959 graduates of the College of Engineering at the University of Illinois at Urbana.

We sincerely thank those graduates who furnished us with the information which made it possible to complete the report.

It is our hope that the following information will be both interesting and helpful.

(Mrs.) Pauline V. Chapman

A handwritten signature in cursive script that reads "Pauline V. Chapman". The signature is written in dark ink and is positioned above the typed name and title.

Placement Director
College of Engineering
University of Illinois
Urbana, Illinois

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TEN-YEAR SALARY PROGRESS OF ENGINEERING GRADUATES WHO RECEIVED A B.S. DEGREE IN 1959

	Number of Questionnaires Sent	Number of Questionnaires Returned	Percent of Return	Military Service	Currently in Graduate College	Employed	Average Monthly Salary 1969	High Monthly Salary 1969	Low Monthly Salary 1969	Average Starting Salary 1959	Percent of Increase 1959-1969
All Engineers	629 ¹	390	62.0%	1.0% 4	1.3% 5	97.7% 381	\$1360.	\$8500. ³	\$ 795. ³	\$512.	165.6% ²
Aero. E.	51	33	64.7%	1	-	32	1399.	1900	1000	526	166.0%
Ag. E.	9	5	55.6%	-	-	5	1340.	1475.	1135.	461.	191.0%
Ceram. E.	9	5	55.6%	-	1	4	1381.	1600.	1000.	517	167.1%
Civil E.	86	49	57.0%	-	1	48	1277.	2500.	920.	481.	165.4%
E. E.	214	124	58.0%	2	1	121	1384.	2375.	850.	531.	160.6%
E. Physics	23	16	69.6%	-	1	15	1363.	2500.	795.	530.	157.2%
Gen. E.	27	20	74.1%	-	-	20	1302.	2000.	918.	503.	158.8%
I. E.	32	20	62.5%	1	-	19	1922.	8500.	1000.	491.	291.4%
M. E.	152	98	64.0%	-	1	97	1285.	2500.	838.	501.	156.5%
Met. E.	20	16	80.0%	-	-	16	1234.	1450.	1060.	520.	137.3%
Min. E.	6	4	66.7%	-	-	4	1281.	1500.	1125.	473.	170.8%

¹ 687 original number - 40 foreign students employed in their home countries not surveyed, 7 returned for incorrect addresses, 5 returned forms gave no salary information, 6 completed forms arrived too late to be included in the report.

² Increase in starting salaries: 1959 to 1969 - 60.5%

³ Highest salary, \$8500 - operates five fried chicken restaurants; lowest salary, \$795 - teaching in small liberal arts college.

SALARY COMPARISON FIGURES OF THOSE GRADUATES WHO HAVE COMPLETED AN ADVANCED DEGREE SINCE 1959 AND THOSE WHO HAVE NOT

	Total Employed	No Advanced Degree	M.S. Original Field	M.S. Other Technical Field	M.S. Non- Technical Field ¹	Ph.D. Original Field ¹	Ph.D. Other Technical Field ¹	Ph.D. Non- Technical Field ¹	M.B.A. ¹	Law ¹	Other ²
All Engineers Average Salary	381	248 \$1319.	62 \$1432.	14 \$1388.	1 \$1191.	22 \$1464.	4 \$1408.	1 \$1510.	20 \$1429	1 \$2500.	8 \$1422.
Aero. & Astro. Eng. Average Salary	32	15 1411.	10 1358.	4 1339.	-	3 1563.	-	-	-	-	-
Agricultural Eng. Average Salary	5	2 1268.	1 1475.	2 1344.	-	-	-	-	-	-	-
Ceramic Eng. Average Salary	4	2 1200.	-	-	-	2 1563.	-	-	-	-	-
Civil Eng. Average Salary	48	37 1255.	8 1389.	-	-	-	-	-	2 1313.	-	1 1140.
Electrical Eng. Average Salary	121	77 1336.	27 1446.	1 1500.	-	9 1572.	-	-	6 1382.	-	1 1610.
Engineering Physics Average Salary	15	4 1310.	2 1234.	1 1510.	-	5 1236.	2 1273.	-	1 2500.	-	-
General Eng. Average Salary	20	14 1231.	-	-	-	-	-	-	4 1604.	-	2 1200.
Industrial Eng. Average Salary	19	9 2204.	3 1943.	1 1400.	-	-	-	-	3 1160.	1 2500.	2 1732.
Mechanical Eng. Average Salary	97	75 1252.	10 1401.	5 1396.	-	1 1222.	2 1543.	1 1510.	1 1140.	-	2 1383.
Metallurgical Eng. Average Salary	16	10 1181.	1 1275.	-	1 1191.	2 1420.	-	-	2 1312.	-	-
Mining Eng. Average Salary	4	3 1208.	-	-	-	-	-	-	1 1500.	-	-

¹ Of the 133 who completed an advanced degree, 67 (50.3%) completed the degree as a full-time student, 62 (46.7%) as a part-time student while employed, 4 (3.0%) did not answer this question.

² 1 Industrial Management, 1 M.S. in Education, 6 did not identify the degree.

1959 GRADUATES PRESENTLY EMPLOYED AND WORKING ON ADVANCED DEGREES

	Total Working on Advanced Degrees	M.S. in Original Field	M.S. in Other Technical Field	M.S. in Non- Technical Field	Ph.D. in Original Field	Ph.D. in Other Technical Field	M.B.A.	Law	Other
All Engineers	53	11	9	5	5	1	17	4	1
Aero. & Astro. Eng.	1	-	1	-	-	-	-	-	-
Agricultural Eng.	1	-	1	-	-	-	-	-	-
Ceramic Eng.	-	-	-	-	-	-	-	-	-
Civil Eng.	5	2	1	-	1	-	1	-	-
Electrical Eng.	16	5	1	1	2	1	6	-	-
Eng. Physics	3	-	2	-	1	-	-	-	-
General Eng.	2	-	-	1	-	-	-	-	1
Industrial Eng.	3	1	-	1	-	-	-	1	-
Mechanical Eng.	18	2	3	1	1	-	10	1	-
Metallurgical	3	1	-	1	-	-	-	1	-
Mining Eng.	1	-	-	-	-	-	-	1	-

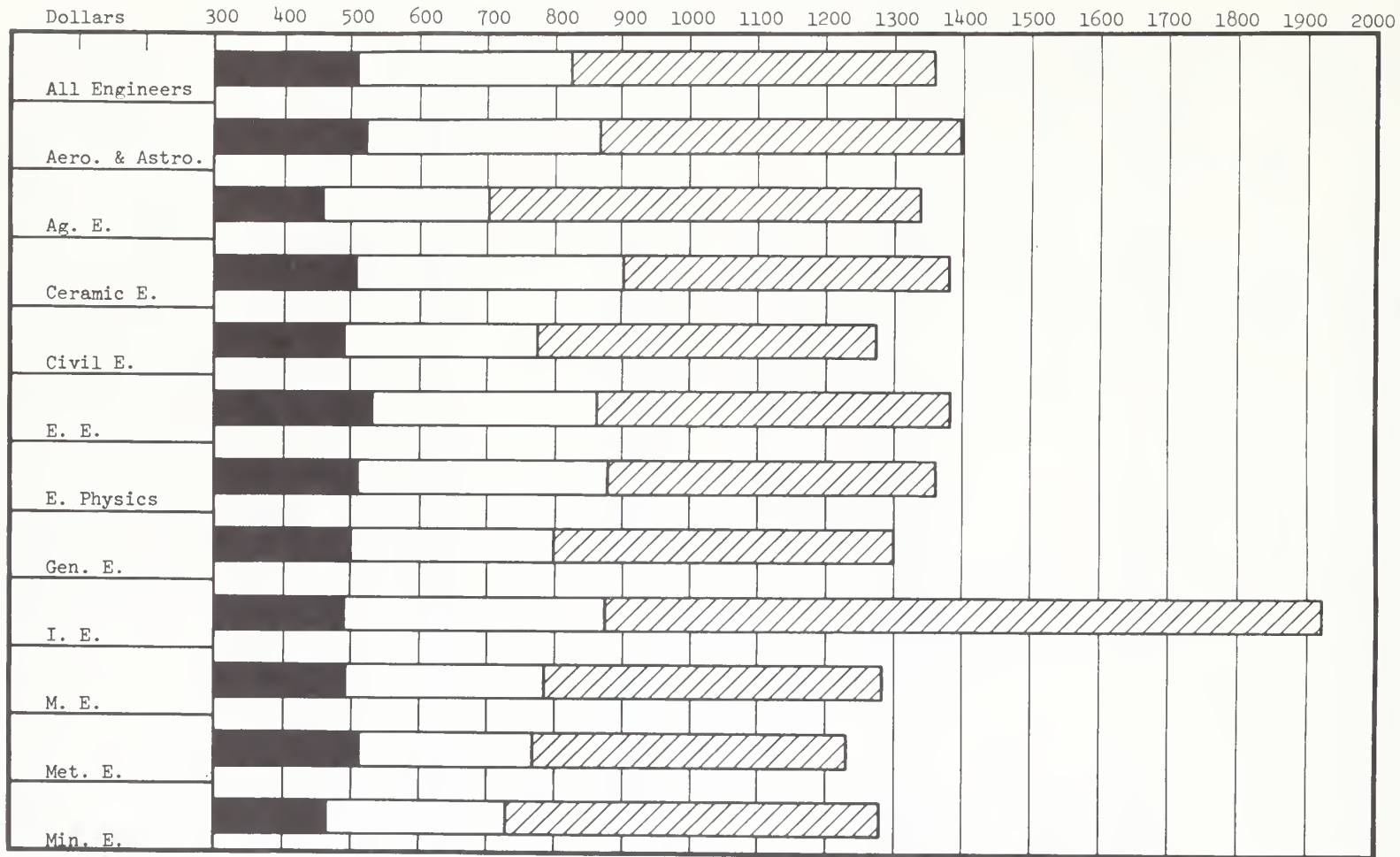
CORRELATION BETWEEN SCHOLASTIC AVERAGE AND FINANCIAL PROGRESS 1959-1969

	Total Employed	1st Decile 5.00 - 4.347	2nd Decile 4.346 - 4.118	3rd Decile 4.117 - 3.915	4th Decile 3.914 - 3.761	5th Decile 3.760 - 3.604	6th Decile 3.603 - 3.473	7th Decile 3.472 - 3.373	8th Decile 3.372 - 3.256	9th Decile 3.255 - 3.139	10th Decile 3.138 - 3.000
All Engineers	381	39 \$1630.	38 \$1439.	38 \$1314.	38 \$1238.	38 \$1385.	38 \$1397.	38 \$1340.	38 \$1283.	38 \$1262.	38 \$1307.
Aero. & Astro. Eng.	32	4 1563.	2 1500.	3 1257.	1 1000.	4 1363.	4 1370.	2 1573.	1 1408.	5 1457.	6 1332.
Agricultural Eng.	5	- -	1 1333.	- -	1 1400.	1 1355.	- -	- -	- -	- -	2 1305.
Ceramic Eng.	4	- -	2 1563.	- -	- -	- -	1 1400.	- -	- -	1 1000.	- -
Civil Eng.	48	2 1264.	3 1306.	3 1257.	5 1282.	7 1225.	6 1528.	3 1203.	7 1276.	7 1293.	5 1070.
Electrical Eng.	121	14 1510.	17 1504.	15 1307.	10 1279.	15 1459.	7 1345.	17 1288.	8 1395.	10 1329.	8 1342.
Eng. Physics	15	5 1563.	1 1420.	3 1367.	3 1104.	- -	3 1265.	- -	- -	- -	- -
General Eng.	20	- -	1 1410.	- -	4 1219.	2 1785.	2 1203.	3 1182.	4 1363.	3 1153.	1 1335.
Industrial Eng.	19	2 4841.	1 1140.	3 1600.	3 1567.	2 1705.	2 2125.	2 1925.	2 1233.	1 1000.	1 1213.
Mechanical Eng.	97	10 1360.	9 1375.	8 1263.	10 1136.	7 1201.	12 1307.	9 1374.	10 1216.	9 1177.	13 1384.
Metallurgical Eng.	16	1 1450.	1 1390.	3 1267.	1 1191.	- -	- -	1 1255.	5 1186.	2 1150.	2 1210.
Mining Eng.	4	1 1125.	- -	- -	- -	- -	1 1500.	1 1250.	1 1250.	- -	- -

RANGE OF 1969 SALARIES OF 1959 ENGINEERING GRADUATES

The monthly salaries are divided according to the degree held in 1969.

<u>B.S. Degree</u>		Salary	Total	Salary	Total	Salary	Total	Salary	Total	<u>M.B.A. Degree</u>	
		\$1345	2	\$1160	1	\$2000	2	\$1175	1		
Salary	Total	1340	1	1150	2	1830	1	1168	1	Salary	Total
\$8500	1	1333	1	1148	1	1801	1	1167	1	\$2500	1
2500	2	1330	2	1141	1	1670	1	1125	1	2000	1
2310	1	1321	1	1140	3	1650	1	1120	1	1670	1
2300	1	1320	1	1135	2	1600	3	1110	2	1600	1
2100	1	1319	2	1127	1	1586	1	1100	1	1500	3
2000	2	1318	1	1125	1	1542	1	1067	1	1410	1
1900	2	1315	1	1118	1	1541	1	1000	1	1400	2
1800	3	1310	1	1109	1	1525	1		77	1361	1
1700	1	1309	1	1100	16	1517	1			1335	1
1675	1	1305	1	1095	1	1510	1	Median	\$1400	1300	2
1660	1	1300	13	1090	1	1500	9			1225	2
1650	1	1296	2	1085	1	1490	1	<u>Ph.D. Degree</u>		1181	1
1625	1	1292	2	1080	2	1475	2			1140	1
1620	1	1291	1	1065	2	1460	1	\$1760	1	1033	1
1600	2	1287	1	1060	5	1458	1	1750	1	1000	1
1580	2	1285	1	1055	1	1455	1	1735	1		20
1550	2	1281	1	1050	3	1430	1	1685	1		
1540	1	1270	2	1045	1	1408	1	1667	1	Median	\$1400
1520	1	1268	1	1040	1	1406	1	1655	1		
1515	1	1265	1	1025	1	1400	8	1600	4	<u>Law</u>	
1512	1	1260	1	1015	1	1382	1	1550	1		
1508	1	1258	1	1000	13	1370	1	1525	1	\$2500	1
1500	14	1255	1	995	2	1360	2	1510	1		1
1491	1	1252	1	975	1	1355	1	1485	1		
1490	1	1250	17	950	1	1350	1	1460	1	<u>Other</u>	
1485	1	1249	1	940	2	1333	2	1450	2		
1475	1	1240	1	925	1	1320	1	1420	1	\$2250	1
1470	1	1235	2	920	2	1317	1	1400	2	1610	1
1466	1	1225	2	918	1	1306	1	1390	1	1416	1
1460	1	1220	1	900	1	1300	2	1300	1	1350	1
1450	3	1210	2	850	1	1280	1	1275	1	1250	1
1435	1	1200	11	838	1	1275	2	1222	1	1213	1
1433	1	1191	1		248	1266	1	1200	1	1150	1
1432	1	1182	1			1256	1	861	1	1140	1
1430	1	1180	2	Median	\$1100	1238	1	795	1		8
1400	12	1175	3			1210	1		27		
1390	1	1170	3	<u>M.S. Degree</u>		1204	1			Median	\$1350
1382	1	1168	1			1200	1	Median	\$1485		
1375	1	1166	2	2375	1	1191	1				
1350	4	1165	1	2200	1	1190	1				



At graduation - 1959 After 5 years - 1964 After 10 years - 1969



AVERAGE MONTHLY SALARIES

JOB CHANGES SINCE 1959

Total Percent of Change	Total Employed	No Change			One Change			Two Changes			Three Changes			Four or More Changes		
		Number	Percent of Change	Salary	Number	Percent of Change	Salary	Number	Percent of Change	Salary	Number	Percent of Change	Salary	Number	Percent of Change	Salary
60.0% All Engineers	381	153	40.2%	\$1325.	113	30.0%	\$1429.	64	16.8%	\$1346.	39	10.2%	\$1352.	12 ¹	3.1%	\$1263.
59.4% Aero. E.	32	13	40.6%	1364.	12	37.5%	1427.	3	9.4%	1373.	3	9.4%	1500.	1	3.1%	1306.
20.0% Ag. E.	5	4	80.0%	1325.	-	-	-	1	20.0%	1400.	-	-	-	-	-	-
75.0% Ceram. E.	4	1	25.0%	1600.	2	50.0%	1463.	-	-	-	-	-	-	1	25.0%	1000.
62.5% Civil E.	48	18	37.5%	1321.	14	29.2%	1327.	6	12.5%	1221.	7	14.5%	1084.	3	6.3%	1342.
59.5% E. E.	121	49	40.5%	1361.	39	32.2%	1394.	19	15.7%	1366.	11	9.1%	1448.	3	2.5%	1517.
53.3% Eng. Physics	15	7	46.6%	1285.	4	26.7%	1315.	3	20.0%	1565.	1	6.7%	1491.	-	-	-
60.0% Gen. E.	20	8	40.0%	1184.	3	15.0%	1479.	4	20.0%	1306.	3	15.0%	1528.	2	10.0%	1168.
57.9% I. E.	19	8	42.1%	1506.	5	26.3%	2980.	5	26.3%	1512.	1	5.3%	2000.	-	-	-
59.8% M. E.	97	39	40.2%	1289.	28	28.9%	1299.	17	17.5%	1290.	11	11.3%	1283.	2	2.1%	969.
68.8% Met. E.	16	5	31.2%	1155.	5	31.2%	1250.	5	31.2%	1287.	1	6.4%	1275.	-	-	-
75.0% Mining E.	4	1	25.0%	1125.	1	25.0%	1250.	1	25.0%	1500.	1	25.0%	1250.	-	-	-

¹ 7 made 4 changes - average salary \$1281.
3 made 5 changes - average salary \$1362.
2 made 8 changes - average salary \$1050.

REASONS FOR CHANGING POSITIONS

Some combining of reasons has been attempted but in order to bring out as many dissatisfactions as possible the following list resulted. Some respondents listed more than one reason; others gave no reason even though one was requested.

REASONS INVOLVING ACTUAL WORK

68 greater opportunity
 64 opportunity for advancement
 17 dissatisfaction with work
 14 to broaden experience
 9 work not challenging
 7 to go into sales
 6 changed field of interest
 5 more responsibility
 4 change to different type of industry
 2 to work more closely in field of college major
 2 lack of interest in work
 1 after completion of program was not placed in job due to cutback in personnel
 1 opportunity to become chief engineer
 1 to take management positions and foreign travel
 1 desired to return to teaching
 1 was not using education
 1 lack of technology in work
 1 could not get into desired department
 1 section dissolved and did not want the position offered
 1 had trouble in training; was offered opportunity to work in a Division but was not interested
 1 locked into undesirable position contrary to agreed training program
 1 preferred the greater rewards and independence of selling securities
 1 not well suited for the position

REASONS INVOLVING THE COMPANY

42 more money
 17 laid-off
 13 poor management
 10 dissatisfied with future outlook of company
 9 company went out of business
 6 completion of project
 6 loss of contracts by company

4 lack of work
 3 incompetent supervisor
 3 dissatisfied with type of company
 3 poor working conditions
 2 reduction in work force
 2 lack of opportunity to further education
 2 fired
 1 asked to resign
 1 company divided into several divisions during merger with another company
 1 reorganization
 1 company had financial problems
 1 company purchased by another and it was an opportunity to help start a new division
 1 company sold Chicago plant
 1 low profit industry
 1 failure of partners to keep promise of new office command
 1 dislike of teaching conditions
 1 company behind the times
 1 training program too long
 1 to join a more progressive company
 1 to join a larger company
 1 move to a smaller firm offering greater opportunity
 1 bad faith of employer
 1 to return to old company

REASONS INVOLVING LOCATION

13 desired to relocate
 11 did not want to accept a transfer to a new location
 4 to return to the Midwest
 3 too much travel
 2 to move to Chicago
 2 move to California
 2 warm climate better
 2 commuting distance and traffic too great
 2 did not like location
 1 frequent relocation

(Cont'd.)

REASONS FOR CHANGING POSITIONS (continued)

REASONS INVOLVING LOCATION (continued)

1 to live in Denver
1 to move to Florida
1 to move to a less populated area

PERSONAL REASONS

23 to return to school
20 personal problems

6 to go into own business
5 enter military service
1 personal growth
1 wanted to fly again
1 to accept employment in private industry
1 wife's health
1 hay fever
1 children's health
1 disgusted

Acme Grinding Company	1 G.E.
Aerojet General Corporation	1 M.E.
Aerospace Corporation	2 A.A.E.
Aetna Bearing Company	1 M.E.
Alderman Britt Company	1 M.E.
All Steel Equipment Company	1 M.E.
Allied Radio Corporation	1 I.E.
Allis Chalmers Manufacturing Company	1 M.E.
American Air Filter Company	1 E.E.
American Can Company	1 E.E., 1 G.E.
American Nickeloid Company	1 M.E.
American Oil Company	1 E.E., 1 I.E., 1 M.E.
Anaconda American Brass Company	1 Met.E.
Andrew Corporation	1 E.E.
Argonne National Laboratory	1 E.P., 1 Met.E.
Armco Steel Company	1 Ag.E., 1 Met.E.
Armour Industrial Chemicals	1 M.E.
Aro, Incorporated	1 A.A.E.
Atlas Chemical Industries, Incorporated	1 M.E.
Avery Label Company	1 I.E.
Baxter Laboratories	1 M.E., 1 Met.E.
Beckman Instruments Company	1 E.E.
Beech Aircraft Corporation	1 A.A.E.
Belting Engineering Company	1 M.E.
Bell and Howell Company	1 G.E.
Bell System: (14)	
Bell Laboratories	1 C.E., 1 E.E., 1 M.E.
Illinois Bell Telephone Company	2 E.E., 1 M.E.
Sandia Corporation	1 Ceram.E. 1 E.E., 1 E.P., 1 M.E.
Western Electric Company	2 E.E., 1 G.E., 1 Met.E.
Beltone Electric Corporation	1 E.E.
Bemis Company, Incorporated	1 M.E.
Bendix Corporation	1 E.E., 1 M.E.
Birr-Wilson and Company, Incorporated	1 E.P.
Boeing Company	2 A.A.E.
Borg-Warner Corporation - Spring Division	1 M.E.
Bourns Caribe, Incorporated	1 M.E.
Bower Roller Bearing Division	1 Met.E.
Bradley University	1 E.E.
Brake Parts Company	1 M.E.
Bryant Air Conditioning Company	1 M.E.
Buchanan, Bellows and Associates	1 E.E., 1 M.E.
Buena Vista College	1 E.P.
Bulk Service Corporation	1 M.E.

Bunker Ramo Corporation
 Ralph H. Burke, Incorporated
 California Computer Products
 Cameron and Jones, Incorporated
 Carter Carburetor Company
 Caterpillar Tractor Company
 Central Illinois Public Service Company
 Chemalloy Company, Incorporated
 Cheshire, Incorporated
 Chicago Aerial Industries
 Chicago Bridge and Iron Company
 Chicago Bureau of Engineering
 Chicago Metropolitan Sanitary District
 Chicago Rawhide Manufacturing Company
 Chrysler Corporation
 City of Chicago
 City of Hollywood, Florida
 City of Racine
 Civil Systems, Incorporated
 Clark, Dietz and Associates
 Clark Equipment Company
 Cleco Industrial Tools
 Collier Carbon and Chemical Corporation
 Collins Radio
 Commercial Control Company
 Commonwealth Edison Company
 Computer Micrographics, Incorporated
 Conco, Incorporated
 Conductron Missouri
 Consulting Engineers Group
 Control Data Corporation
 County of Shasta California
 Crane Packing Company
 Cummins Engine Company
 Dalmo Victor Company
 De Leuw Cather and Associates
 Dow Chemical Company
 Eastman Kodak Company
 Electronic Arrays, Incorporated
 Electronic Enclosures
 Electronic Engineering Company
 Elkey Manufacturing Company
 Emerson Electric Company
 H.J. Eppel Company
 Fairchild Semiconductor Company
 Federal Aviation Corporation
 Federal Power Commission
 Fedders, Norge Division

1 E.E.
 1 C.E.
 1 E.E.
 1 Min.E.
 1 M.E.
 2 Ag.E., 1 E.E., 5 M.E.
 1 Min.E.
 1 Ceram.E.
 1 M.E.
 1 E.E.
 1 C.E.
 1 C.E.
 1 C.E.
 1 M.E.
 1 M.E.
 1 M.E.
 1 G.E.
 1 C.E.
 1 E.E.
 1 C.E.
 1 G.E.
 1 M.E.
 1 I.E.
 4 E.E., 1 E.P., 1 I.E.
 1 G.E.
 1 E.E.
 1 E.E.
 1 M.E.
 1 E.E., 1 Met.E.
 1 C.E.
 1 C.E., 1 E.E.
 1 C.E.
 1 Met.E.
 1 M.E.
 1 E.E.
 1 C.E.
 1 E.E.
 1 E.E., 1 E.P., 1 M.E.
 1 E.E.
 1 M.E.
 1 E.P.
 1 M.E.
 1 E.E.
 1 C.E.
 1 E.E.
 1 E.E.
 1 C.E.
 1 M.E.

Fendall Company	1 M.E.
Ford Motor Company	2 M.E.
Elmer T. Freethy Company	1 C.E.
Freightliner Corporation	1 M.E.
Gauger and Diehl	1 I.E.
General Dynamics Corporation: (5)	
Convair	1 A.A.E.
Ft. Worth	1 M.E.
Pomona	2 A.A.E., 1 E.E.
General Telephone Company: (3)	
Automatic Electric	2 E.E.
General Telephone - Bloomington	1 E.E.
General American Transportation	1 C.E.
General Electric Company	3 A.A.E., 3 E.E., 1 E.P., 2 G.E., 2 M.E.
General Motors Corporation: (4)	
A.C. Electronics	1 E.P.
Delco Remy Division	1 M.E.
Indianapolis Division	1 Met.E.
Packard Electric Division	1 I.E.
R.W. Goers and Associates	1 C.E.
B.F. Goodrich Company	1 Met.E.
W.R. Grace - Research Division	1 Ceram.E.
Graver Tank Manufacturing Company	1 M.E.
Grumman Aircraft Company	1 E.E.
R.E. Hamilton Consulting Engineers	1 C.E.
Harnischfeger Corporation	1 M.E.
Heil Company	1 M.E.
Elmer L. Henn, Incorporated	1 C.E.
Walter Hesse Company	1 C.E.
Honeywell	2 M.E.
Howe Coal Company	1 Min.E.
Hughes Aircraft Company	5 E.E.
Humble Oil and Refining Company	1 G.E.
I.I.T. Research	1 G.E., 1 Met.E.
Illinois Division of Highways	7 C.E.
Illinois Power Company	1 E.E.
Instrument Associates	1 E.E.
Intermark Investing, Incorporated	1 G.E.
International Harvester Company	2 M.E., 1 I.E.
International Telephone and Telegraph Company	1 E.E., 1 M.E.
I.B.M.	4 E.E., 1 M.E., 1 I.E.
Interstate Engineering Company	1 M.E.
Iowa-Illinois Gas and Electric Company	2 E.E.
Johns-Manville Corporation	1 C.E.
K.G. Incorporated	1 I.E.
Kaiser Engineering	1 C.E.
Kaiser Industries Center for Research and Development	1 M.E.
Kiekhaefer Mercury	1 M.E.

Latrobe Steel Company	1 Met.E.
Link Division, Singer Company	1 I.E.
F.S. Littell Machine Company	1 E.E.
Arthur D. Little Company	1 E.E.
Litton Industries	1 E.E.
Lockheed Corporation	3 A.A.E., 3 E.E.
Louis Allis Company	1 E.E.
MacNeal-Schwendler Corporation	1 A.A.E.
Magnavox Corporation	1 G.E.
P.R. Mallory Company	1 M.E.
Ira C. Mast Construction Company	1 C.E.
McDonnell-Douglas Corporation: (12)	
Huntington Beach	1 A.A.E., 2 E.E., 1 M.E.
Long Beach	1 M.E.
Rancho Cordova	1 A.A.E.
St. Louis	2 A.A.E., 1 C.E., 1 E.E., 1 M.E.
Santa Monica	1 A.A.E.
F.W. Means Company	1 M.E.
Mechanical Products Division, Aiken Industries	1 M.E.
Merriam, Marshall, Shapiro and Kloss	1 I.E.
Meyer Material Company	1 C.E.
Midway Equipment Company	1 C.E.
Mitre Corporation	1 E.E.
Monsanto Chemical Company	1 M.E.
John D. Morgan Company	1 M.E.
Robert E. Morgan and Associates	1 C.E.
Motorola	5 E.E.
N.A.S.A.: (9)	
Goddard Space Flight Center	1 E.E.
Houston	2 E.E., 1 M.E.
Kennedy Space Center	1 E.E., 1 M.E.
Lerc, Plum Brook Station	1 E.E.
Lewis Research Center	1 A.A.E., 1 M.E.
National Cash Register Company	1 E.E.
National Cylinder Gas Company	1 Met.E.
Nelson Electric Company	1 M.E.
New York University	1 I.E.
North American Aviation: (8)	
Autonetics Division	5 E.E., 1 G.E.
Downey Division	2 A.A.E.
North Chicago Refiners and Smelters	1 Met.E.
Owens-Illinois Glass Company	1 M.E.
Pacific Telephone Company	1 E.E.
Pacific Stereo and Hi-Fi Company	1 E.E.
Patzig Testing Laboratory, Incorporated	1 C.E.
Peripheral Systems, Incorporated	1 M.E.
Philco-Ford	3 E.E., 1 E.P., 1 M.E.
Phillips Petroleum Company	1 E.P.

Port Allen Marine Service, Incorporated	1 C.E.
Portland Cement Company	1 C.E.
Power Application and Manufacturing Company	1 M.E.
Pratt and Whitney Aircraft Company	1 Met.E.
Premium Instruments Company	1 G.E.
Princeton University	1 A.A.E.
Procter and Gamble Company	1 I.E.
Radiation Corporation	2 E.E.
Raytheon Corporation	1 E.E.
Reliable Electric Company	1 M.E.
Reynolds Metals Company	1 M.E.
Rock Valley College	1 M.E.
Royal Industries	1 M.E.
Sacramento State College	1 M.E.
Sacramento Municipal Utility District	1 M.E.
Schulz Electric Company	1 M.E.
Scientific Data Corporation	1 E.E.
Semiconductor Specialists	1 E.E.
Shell Oil Company	1 M.E.
Sherwin Williams Company	1 C.E.
Simplomatic Manufacturing Company	1 C.E.
Spartan Printing Company	1 M.E.
Sperry Flight Systems	1 I.E.
Sperry Gyroscope Company	1 E.E.
Sperry Rand Corporation	1 A.A.E.
St. Louis University	1 M.E.
Sundstrand Aviation	1 Ag.E. 1 E.E., 1 G.E.
Superior Engineering Company	1 C.E.
Sylvania Electronic Systems	1 E.E.
Synrox, Incorporated	1 Ceram.E.
Syntronic Instruments, Incorporated	1 E.E.
Syracuse Electric Company	1 E.E.
Tele Dynamics Corporation	1 E.E.
Texas Instruments Company	1 M.E.
Trane Company	2 C.E., 1 I.E.
Trans Union Corporation	1 G.E.
T.R.W. Systems	2 A.A.E., 3 E.E., 1 E.P., 1 Met.E.
Union Carbide Corporation	1 C.E.
United Aircraft Corporation	1 A.A.E., 1 E.E.
United Airlines	1 G.E.
United Technology Laboratory	1 E.E.
United Technology Center	1 E.E., 1 M.E.
University of California - Riverside	1 E.P.
University of Evansville	1 M.E.
University of Illinois	1 E.P., 1 M.E.
University of Michigan	1 E.E.
University of Missouri at Rolla	1 M.E.
U.S. Army, West Germany	1 M.E.

U.S. Army, St. Louis, Missouri	1 A.A.E.
U.S. Army Behavioral Science Research Laboratory	1 I.E.
U.S. Army Corps of Engineers	1 C.E., 1 G.E.
U.S. Army Waterways Experiment Station	1 C.E.
U.S. Army - 5th Headquarters	1 C.E.
U.S. Army Missile - Redstone Arsenal	1 E.E.
U.S. Army Savanna Depot	1 I.E.
U.S. Army Weapons Laboratory	1 I.E.
U.S. Department of Interior, Federal Water Pollution Control Administration	1 C.E.
U.S. Environmental Services Administration	1 E.E.
U.S. Gypsum Company	1 Min.E.
U.S. Steel Corporation	1 E.E.
Valmont Industries, Incorporated	1 Ag.E.
Victor-Dana Corporation	1 M.E.
Volt Information Sciences	1 A.A.E.
Vonco Products, Incorporated	1 M.E.
Warner Electric Company	1 G.E.
Warren and Van Praag	1 C.E.
Washington University	1 E.E., 1 E.P.
Watlow Electric Manufacturing Company	1 M.E.
Wems, Incorporated	1 E.E.
Westenhoff and Novick	1 C.E.
Westinghouse	1 A.A.E., 2 E.E., 1 M.E.
White Rogers Corporation	1 E.E.
Wisconsin Electric Company	1 E.E.
Xerox Corporation	1 E.E.
York Corporation	1 M.E.
Youngstown Sheet and Tube Company	1 E.E.
Zenith Radio	1 E.E., 1 M.E.

PRESENT GEOGRAPHIC LOCATION OF 1959 ENGINEERING GRADUATES

Location	All Engineers	Percent	Geographic Location 1959	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
Illinois	137	36.0%	41.2%	1	3	-	29	34	2	11	9	39	8	1
Chicago & Suburbs 73														
Outside Chicago 64														
California	78	20.5%	21.5%	16	-	-	3	36	5	3	2	12	1	-
Missouri	19	5.0%	4.4%	3	-	-	2	5	1	-	-	7	1	-
New York	19	5.0%	2.8%	1	-	-	4	6	2	2	2	2	-	-
Indiana	13	3.4%	4.4%	-	-	-	2	3	-	-	-	7	1	-
Ohio	12	3.1%	4.0%	2	-	1	1	2	-	1	1	3	1	-
Iowa	10	2.6%	2.1%	-	-	-	1	1	-	-	-	-	-	-
Pennsylvania	8	2.1%	4.3%	1	-	1	-	5	2	-	1	-	-	1
Texas	8	2.1%	.2%	-	-	-	-	4	-	-	-	2	1	-
Wisconsin	8	2.1%	3.3%	-	-	-	2	1	1	-	1	4	1	-
Florida	7	1.8%	.7%	-	-	-	1	4	-	1	-	1	-	-
Michigan	7	1.8%	1.6%	-	-	-	-	1	-	1	-	5	-	-
Massachusetts	5	1.3%	1.0%	-	-	-	-	5	-	-	-	-	-	-
New Jersey	5	1.3%	1.9%	1	-	-	1	2	-	-	-	1	-	-
Alabama	4	1.0%	-	2	-	-	-	2	-	-	-	-	-	-
Colorado	4	1.0%	.5%	-	-	-	-	2	-	-	-	1	-	1
Connecticut	4	1.0%	.7%	1	-	-	-	1	-	-	-	1	1	-
Minnesota	4	1.0%	.5%	-	1	-	-	1	-	-	-	2	-	-
New Mexico	4	1.0%	.5%	-	-	1	-	1	1	-	-	1	-	-
Arizona	3	.8%	.2%	-	-	-	-	-	-	-	1	2	-	-
Maryland	3	.8%	.2%	1	-	1	-	1	-	-	-	-	-	-
Oklahoma	3	.8%	.2%	-	-	-	-	-	-	-	-	2	-	1
Kentucky	2	.5%	-	-	-	-	-	1	-	-	-	-	1	-
Louisiana	2	.5%	.2%	-	-	-	1	-	-	1	-	-	-	-
Virginia	2	.5%	-	-	-	-	-	-	-	-	2	-	-	-
Georgia	1	.3%	.2%	-	-	-	-	-	-	-	-	1	-	-
Idaho	1	.3%	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	1	.3%	-	1	-	-	-	-	1	-	-	-	-	-
Mississippi	1	.3%	-	-	-	-	1	-	-	-	-	-	-	-
Nebraska	1	.3%	-	-	1	-	-	-	-	-	-	-	-	-
North Carolina	1	.3%	-	-	-	-	-	1	-	-	-	-	-	-
Puerto Rico	1	.3%	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	1	.3%	.5%	1	-	-	-	-	-	-	-	1	-	-
Washington (state)	1	.3%	1.4%	1	-	-	-	-	-	-	-	-	-	-
West Germany	1	.3%	-	-	-	-	-	-	-	-	-	1	-	-
Totals	381	100.0%		32	5	4	48	121	15	20	19	97	16	4

SIZE OF ORGANIZATIONS IN WHICH THE 1959 GRADUATES ARE NOW EMPLOYED

	All Engineers	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
Total Employed	381	32	5	4	48	121	15	20	19	97	16	4
0-50 Employees	35 9.2% \$1448.	2 6.3% \$1466.	- - -	2 50.0% \$1200.	11 22.9% \$1348.	5 4.1% \$1637.	1 6.7% \$ 795.	3 15.0% \$1384.	2 10.5% \$1900.	8 8.2% \$1513.	- - -	1 25.0% \$1500.
51-150 Employees	25 6.6% 1611.	- - -	- - -	- - -	8 16.7% 1205.	6 5.0% 1337.	- - -	- - -	3 15.8% 3967.	7 7.2% 1352.	- - -	1 25.0% 1250.
151-500 Employees	41 10.8% 1254.	- - -	1 20.0% \$1400.	- - -	6 12.6% 1194.	11 9.1% 1330.	3 20.0% 1617.	1 5.0% 1200.	- - -	17 17.6% 1159.	2 12.5% \$1223.	- - -
501-5000 Employees	118 31.0% 1299.	11 34.4% 1375.	1 20.0% 1475.	- - -	14 29.1% 1203.	35 28.9% 1305.	5 33.3% 1296.	5 25.0% 1367.	8 42.1% 1549.	31 32.0% 1250.	7 43.8% 1207.	1 25.0% 1250.
5001- 10,000 Employees	33 8.6% 1447.	4 12.5% 1415.	- - -	1 25.0% 1600.	5 10.4% 1632.	12 9.9% 1419.	2 13.3% 1350.	2 10.0% 1535.	1 5.3% 1620.	4 4.1% 1281.	2 12.4% 1395.	- - -
Over 10,000 Employees	129 33.8% 1356.	15 46.8% 1405.	3 60.0% 1274.	1 25.0% 1525.	4 8.3% 1169.	52 43.0% 1422.	4 26.7% 1404.	9 45.0% 1199.	5 26.3% 1359.	30 30.9% 1316.	5 31.3% 1210.	1 25.0% 1125.

THE EMPLOYED 1959 GRADUATES ARE NOW EMPLOYED BY THE FOLLOWING TYPES OF COMPANIES

Type of Company ¹	All Engineers	Percent	1969 Average Salary	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
Aircraft, Missile, & Space	62	16.3%	\$1391.	25 \$1428.	-	-	-	21 \$1401.	2 \$1455.	2 \$1348.	1 \$1140.	8 \$1331.	3 \$1242.	-
Electronics	49	12.9%	1404.	1 1333.	-	-	-	35 1410.	3 1319.	2 1238.	2 1705.	5 1409.	1 1191.	-
Metals & Metal Products	28	7.3%	1316.	-	2 \$1268.	-	3 \$1203.	4 1419.	-	4 1553.	1 1165.	9 1292.	5 1203.	-
Consulting Engineers	23	6.0%	1361.	2 1500.	-	-	12 1218.	3 1653.	-	1 1335.	1 2000.	3 1300.	1 -	\$1500.
Federal Government	20	5.2%	1325.	2 1240.	-	-	4 1286.	6 1395.	1 1400.	1 1200.	3 1367.	3 1267.	-	-
Communications Equipment	19	5.0%	1320.	-	-	-	-	14 1387.	1 1050.	1 1000.	1 1213.	1 1175.	1 1225.	-
Chemical & Chemical Products	17	4.5%	1273.	-	-	2 \$1263.	2 1175.	2 1310.	1 1750.	-	1 1350.	6 1228.	3 1227.	-
Heavy Equipment	15	3.9%	1340.	-	3 1388.	-	1 1500.	2 1525.	-	1 1250.	-	8 1268.	-	-
Data Processing	14	3.7%	1446.	-	-	-	1 1400.	8 1470.	-	-	1 2100.	4 1247.	-	-
Electrical Equipment	14	3.7%	1173.	1 1000.	-	-	-	6 1127.	-	-	-	7 1237.	-	-
Schools	14	3.7%	1290.	1 1275.	-	-	-	3 1506.	3 952.	-	-	6 1326.	1 1450.	-
Automobile & Auto- motive Equipment	13	3.4%	1269.	-	-	-	-	1 1045.	-	-	1 1300.	11 1287.	-	-
Public Utility	13	3.5%	1247.	-	-	-	1 1225.	9 1253.	-	-	-	2 1233.	-	1 1250.
Research Laboratory	13	3.5%	1351.	-	-	1 1600.	2 1326.	2 1485.	2 1300.	2 1250.	-	3 1284.	1 1390.	-
Construction	8	2.2%	1347.	-	-	-	6 1425.	-	-	-	-	1 1100.	-	1 1125.

(Continued on following page.)

THE EMPLOYED 1959 GRADUATES ARE NOW EMPLOYED BY THE FOLLOWING TYPES OF COMPANIES (continued)

Type of Company ¹	All Engineers	Percent	1969 Average Salary	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
Heating & Air Conditioning	7	1.9%	\$1747.	-	-	-	2 \$2000.	-	-	-	1 \$2250.	4 \$1495.	-	-
State Government	7	1.9%	1053.	-	-	-	7 1053.	-	-	-	-	-	-	-
City Government	6	1.7%	1048.	-	-	-	4 1113.	-	-	1 \$1000.	-	1 838.	-	-
Controls & Instrumentation	6	1.7%	1268.	-	-	-	-	2 \$1310.	1 \$1420.	1 918.	-	2 1325.	-	-
Petroleum	5	1.4%	1255.	-	-	-	-	1 920.	-	1 1410.	1 1181.	2 1382.	-	-
Food	3	.8%	3833.	-	-	-	-	-	-	-	3 3833.	-	-	-
Paper & Printing	3	.8%	1133.	-	-	-	-	-	-	-	1 1300.	2 1050.	-	-
Transportation & Equipment	3	.8%	1240.	-	-	-	-	1 1200.	-	1 1055.	-	1 1466.	-	-
Glass	2	.5%	1170.	-	-	1 \$1400.	-	-	-	-	-	940.	-	-
Industrial Service	2	.5%	1216.	-	-	-	1 1140.	-	-	-	-	1 1292.	-	-
Marine Construction	2	.5%	1375.	-	-	-	1 1500.	-	-	-	-	1 1250.	-	-
Seal Manufacturing	2	.5%	1155.	-	-	-	-	-	-	-	-	1 1249.	1 \$1060.	-
Banking & Investment	1	.2%	2500.	-	-	-	-	-	1 2500.	-	-	-	-	-
Coal Company	1	.2%	1250.	-	-	-	-	-	-	-	-	-	-	1 \$1250.
Conglomerate	1	.2%	2000.	-	-	-	-	-	-	1 2000.	-	-	-	-
Home Appliance	1	.2%	1140.	-	-	-	-	-	-	-	-	1 1140.	-	-
Machine Tool	1	.2%	1310.	-	-	-	-	-	-	-	-	1 1310.	-	-

(Continued on following page.)

THE EMPLOYED 1959 GRADUATES ARE NOW EMPLOYED BY THE FOLLOWING TYPES OF COMPANIES (continued)

Type of Company ¹	All Engineers	Percent	1969 Average Salary	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
Material Testing	1	.2%	\$1801.	-	-	-	¹ \$1801.	-	-	-	-	-	-	-
Manufacturers Representative	1	.2%	1500.	-	-	-	-	¹ \$1500.	-	-	-	-	-	-
Packaging	1	.2%	1350.	-	-	-	-	-	-	-	-	¹ \$1350.	-	-
Patent Law Firm	1	.2%	2500.	-	-	-	-	-	-	-	¹ \$2500.	-	-	-
Photographic Equipment	1	.2%	1000.	-	-	-	-	-	-	¹ \$1000.	-	-	-	-
Safety Equipment	1	.2%	1416.	-	-	-	-	-	-	-	-	¹ 1416.	-	-
Totals	381	100.0%		32	5	4	48	121	15	20	19	97	16	4

¹ The companies were classified by the respondents.

PRESENT FIELD OF PRIMARY RESPONSIBILITY

Field ¹	All Engineers	Percent	1969 Average Salary	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
Management and Administration	87	22.9%	\$1378.	4 \$1358.	1 \$1475.	1 \$1400.	9 \$1264.	29 \$1485.	1 \$1300.	6 \$1288.	8 \$1310.	22 \$1379.	4 \$1222.	2 \$1188.
Development	52	13.6%	1309.	7 1356.	-	1 1600.	-	21 1306.	3 1437.	1 1250.	-	16 1282.	3 1153.	-
Design	47	12.3%	1219.	5 1359.	-	-	9 1112.	13 1267.	2 1235.	2 1318.	-	15 1185.	1 1150.	-
Systems Engineering	31	8.1%	1329.	8 1399.	-	-	2 1253.	14 1349.	-	-	-	7 1232.	-	-
Sales	30	7.9%	1438.	1 1900.	1 1135.	1 1000.	5 1468.	10 1411.	2 1996.	1 918.	1 2250.	8 1313.	-	-
Research	28	7.3%	1449.	3 1463.	1 1333.	1 1525.	2 1185.	10 1541.	4 1379.	2 1675.	1 1400.	2 1300.	2 1333.	-
Consulting	16	4.2%	1488.	1 1800.	-	-	6 1324.	2 1750.	-	1 1335.	2 2000.	3 1243.	-	1 1500.
Manufacturing	16	4.2%	1156.	-	-	-	-	2 1018.	-	3 1163.	2 1177.	8 1170.	1 1255.	-
Teaching	12	3.1%	1283.	-	-	-	-	2 1559.	3 952.	-	-	6 1329.	1 1450.	-
Construction	11	2.9%	1286.	-	-	-	10 1315.	-	-	1 1000.	-	-	-	-
Field Engineering	8	2.1%	1230.	-	-	-	2 1025.	3 1395.	-	1 1390.	-	2 1109.	-	-
Company Owner	7	1.8%	2703.	-	-	-	1 1500.	1 1520.	-	1 1900.	1 8500.	3 1833.	-	-
Analysis and Testing	6	1.6%	1350.	1 1340.	1 1355.	-	1 1801.	3 1200.	-	-	-	-	-	-
Production	6	1.6%	1363.	-	-	-	-	1 1225.	-	-	2 1600.	1 1310.	1 1191.	1 1250.
Data Processing	4	1.0%	1401.	-	-	-	-	2 1188.	-	-	1 1830.	-	1 1400.	-

(Continued on following page.)

PRESENT FIELD OF PRIMARY RESPONSIBILITY (continued)

Field ¹	All Engineers	Percent	1969 Average Salary	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
Design and Development	4	1.0%	\$1304.	1 \$1141.	1 \$1400.	-	-	1 \$1475.	-	-	-	1 \$1200.	-	-
Service	4	1.0%	1085.	-	-	-	1 \$1260.	-	-	-	-	2 949.	1 \$1180.	-
Patent Law Work	3	.8%	1714.	-	-	-	-	1 1541.	-	-	1 \$2500.	-	1 1100.	-
Pilot	2	.5%	1128.	-	-	-	-	1 1200.	-	1 \$1055.	-	-	-	-
Advertising	1	.3%	1250.	-	-	-	-	1 1250.	-	-	-	-	-	-
Applications Engineering	1	.3%	1168.	-	-	-	-	1 1168.	-	-	-	-	-	-
Facility Planning	1	.3%	995.	-	-	-	-	1 995.	-	-	-	-	-	-
Foreign Intelligence	1	.3%	1296.	1 1296.	-	-	-	-	-	-	-	-	-	-
Maintenance	1	.3%	1400.	-	-	-	-	1 1400.	-	-	-	-	-	-
Plant Engineering	1	.3%	1500.	-	-	-	-	1 1500.	-	-	-	-	-	-
Quality Engineering	1	.3%	1095.	-	-	-	-	-	-	-	-	1 1095.	-	-
Totals	381	100.0%		32	5	4	48	121	15	20	19	97	16	4

¹ Field of responsibility was identified by respondents.

PRESENT LEVEL OF RESPONSIBILITY

	All Engineers	Supervise a Small Group	Individual in a Group	Manage Major Group or Department	Top Executive	Plant Manager	Branch Manager	Individual in Private Practice	Other Not Identified
All Engineers	377 ¹	134	123	77	16	14	6	3	4
Percent		35.6%	32.6%	20.4%	4.2%	3.7%	1.6%	.8%	1.1%
Average Salary		\$1309.	\$1276.	\$1413.	\$2073.	\$1406.	\$1350.	\$1722.	\$1467.
Aero. & Astro. E.	32	10 31.3%	14 43.7%	6 18.8%	-	1 3.1%	-	-	1 3.1%
		1420.	1314.	1547.	-	1500.	-	-	1400.
Ag. E.	5	1 20.0%	3 60.0%	1 20.0%	-	-	-	-	-
		1400.	1274.	1475.	-	-	-	-	-
Ceram. E.	4	-	2 50.0%	1 25.0%	1 25.0%	-	-	-	-
		-	1300.	1525.	1400.	-	-	-	-
Civil E.	48	15 31.3%	9 18.7%	10 20.8%	6 12.5%	4 8.3%	2 4.2%	2 4.2%	-
		1125.	1246.	1261.	1540.	1488.	1375.	1334.	-
E. E.	120	43 35.8%	43 35.8%	25 20.9%	3 2.5%	1 .8%	3 2.5%	-	2 1.7%
		1350.	1296.	1564.	1590.	1400.	1417.	-	1399.
E. Physics	15	7 46.7%	5 33.3%	2 13.3%	-	-	-	1 6.7%	-
		1227.	1313.	1396.	-	-	-	2500.	-
Gen. E.	20	9 45.0%	4 20.0%	4 20.0%	2 10.0%	-	-	-	1 5.0%
		1199.	1209.	1213.	1950.	-	-	-	1670.
I. E.	19	6 31.7%	4 21.0%	8 42.0%	1 5.3%	-	-	-	-
		1631.	1705.	1426.	8500.	-	-	-	-
M. E.	95	36 37.9%	34 35.7%	15 15.7%	3 3.2%	6 6.4%	1 1.1%	-	-
		1293.	1200.	1324.	1783.	1386.	1100.	-	-
Met. E.	16	6 37.4%	4 25.0%	5 31.3%	-	1 6.3%	-	-	-
		1319.	1156.	1186.	-	1270.	-	-	-
Min. E.	3	1 33.3%	1 33.3%	-	-	1 33.4%	-	-	-
		1250.	1500.	-	-	1250.	-	-	-

¹ 4 respondents (1 E.E., 2 M.E., 1 Min.E.) did not answer this question.

HOW MANY ENGINEERS AND SCIENTISTS WORK IN THE ORGANIZATIONAL UNIT
TO WHICH YOU BELONG IN YOUR CURRENT MAJOR POSITION?

	All Engineers	Aero. E.	Ag. E.	Ceram. E.	Civil E.	E. E.	Eng. Physics	Gen. E.	I. E.	M. E.	Met. E.	Min. E.
None	21 5.6%	- -	- -	- -	6 28.6%	2 9.5%	1 4.8%	5 23.8%	2 9.5%	3 14.3%	2 9.5%	- -
1-3	55 14.7%	- -	- -	1 1.8%	10 18.3%	17 30.9%	1 1.8%	2 3.6%	2 3.6%	19 34.6%	2 3.6%	1 1.8%
4-10	108 28.8%	7 6.5%	2 1.9%	1 .9%	13 12.0%	27 25.0%	4 3.7%	5 4.6%	8 7.4%	36 33.4%	5 4.6%	- -
11-20	62 16.5%	6 9.7%	- -	- -	6 9.7%	24 38.7%	1 1.6%	2 3.2%	5 8.1%	15 24.2%	1 1.6%	2 3.2%
21-50	65 17.3%	11 16.9%	1 1.5%	1 1.5%	8 12.3%	25 38.5%	4 6.3%	3 4.6%	1 1.5%	8 12.3%	3 4.6%	- -
51-100	27 7.2%	4 14.9%	1 3.7%	- -	- -	11 40.7%	2 7.4%	- -	1 3.7%	7 25.9%	1 3.7%	- -
101-300	22 5.9%	3 13.6%	- -	1 4.5%	- -	10 45.6%	1 4.5%	2 9.1%	- -	4 18.2%	1 4.5%	- -
Over 300	15 4.0%	1 6.7%	1 6.7%	- -	4 26.6%	4 26.6%	- -	1 6.7%	- -	3 20.0%	1 6.7%	- -
Total	375 ¹	32	5	4	47	120	14	20	19	95	16	3

¹ 6 respondents (1 C.E., 1 E.E., 1 E.P., 2 M.E., 1 Min.E.) did not answer this question.

QUESTIONS CONCERNING PRESENT POSITION AND ITS RELATION TO THEIR UNDERGRADUATE DEGREE

QUESTION: To hold your present position is it important for you to have an engineering degree?

Yes	332	88.3%
No	44	11.7%
5 respondents did not answer this question		

QUESTION: How much knowledge and skill related to your undergraduate degree do you apply in your present position?

Most or all	103	27.0%
Some	201	52.7%
Very little	64	16.8%
None	9	2.4%
No reply	4	1.1%
	<u>381</u>	

QUESTION: On the average, how many hours a week do you work on your job? (6 respondents did not answer this question.)

41-45 hours	123	32.8%
31-40 hours	101	26.9%
46-50 hours	94	25.1%
51 or more hours	53	14.1%
30 or less hours	4	1.1%
	<u>375</u>	

QUESTION: If you have not received an advanced degree and are not working toward one, do you feel that this has been a limiting factor in your progress with your company and in your work?

Yes	26
No	199

Only 225 of the 381 employed respondents answered this question.

The 30 respondents who answered "yes" to this question gave the following reasons:

Aero. & Astro. Eng.

1. "I am sure recognition is given to those who are willing to do additional work to better themselves."
2. "The company appears to be Ph.D. oriented."
3. "Position and salary."

(Continued on following page.)

QUESTIONS CONCERNING PRESENT POSITION AND ITS RELATION TO THEIR UNDERGRADUATE DEGREE (continued)

Civil Eng.

1. "Ph.D. considered important in university teaching."
2. "In my present position I feel that a stronger business background is necessary."
3. "Need more technical training."
4. "An M.B.A. would have enabled me to start at a level of greater exposure to general business."
5. "An advanced degree would allow more specifically engineering work and less handbook work."
6. "Trial and error takes too long."

Electrical Eng.

1. "Management not usually B.S.E.E. only."
2. "The company management training program usually takes nominees with advanced degrees."
3. "Greater administrative and business exposure."
4. "It is better to have Ph.D. degree to head up R & D."
5. No reason given.
6. "Promotion is much slower, everyone has a B.S. degree."
7. "It opens doors for management."
8. "Competition with employees with advanced degrees."
9. "An advanced degree is partly status symbol and partly an indicator of the desire to get ahead."

Mechanical Eng.

1. "Much industrial advancement is so impersonal that there is often little else to go on."
2. "In last company (respondent has made 8 position changes) I would have been engineering manager if I had an M.S. or M.B.A."
3. "50% of competition have advanced degree."
4. "Increased technical knowledge is required."
5. "Most of the people chosen for management have M.B.A."
6. "Most Ph.D.'s seem to have the higher positions and salaries."
7. "Promotions consider advanced education as important."

Metallurgical Eng.

1. "From now on I feel management would desire to promote persons with higher degrees with less reservation."

QUESTIONS CONCERNING CURRICULUM

QUESTION: Rank in order, the value (1, 2, 3, etc.) of additional degrees which you feel would be the most valuable to you.

Order of Importance

Degree	1st	2nd	3rd	4th	5th	6th
M.B.A.	146 43.6%	40 11.9%	28 8.3%	4 1.2%	-	6 1.8%
M.S. in Original Field	45 13.4%	46 13.7%	29 8.7%	3 .9%	6 1.8%	4 1.2%
M.S. in Another Technical Field	38 11.3%	41 12.3%	40 11.9%	8 2.4%	4 1.2%	2 .6%
Law	24 7.2%	48 14.3%	35 10.4%	4 1.2%	5 1.5%	7 2.1%
Ph.D. in Original Field	37 11.0%	26 7.8%	31 9.3%	3 .9%	7 2.1%	-
Ph.D. in Another Technical Field	24 7.2%	21 6.3%	21 6.3%	4 1.2%	2 .6%	4 1.2%
Other (none specified)	21 6.3%	9 2.7%	14 4.2%	1 .3%	2 .6%	3 .9%
No Choice Listed	-	104 31.0%	137 40.9%	308 91.9%	309 92.2%	309 92.2%
Totals	335 ¹	335	335	335	335	335

¹ 46 respondents did not answer this question.

QUESTION: If you had it to do all over again would you choose: (9 respondents did not answer this question.)

229	61.5%	a specialized undergraduate engineering curriculum
49	13.3%	a common undergraduate curriculum, no specialization
47	12.6%	another type of undergraduate professional curriculum (pre-law, pre-medicine, etc.)
18	4.8%	another type of curriculum in mathematics or the physical sciences (physics, chemistry, etc.)
16	4.3%	a business administration curriculum
5	1.3%	a liberal arts curriculum
8 ¹	2.2%	Other
372		

¹ 5 did not identify other curriculum; 2 engineering and business administration; 1 M.S. in Physics then Ph.D. in Engineering.

QUESTIONS CONCERNING PROFESSIONAL DEVELOPMENT

QUESTION: Have you become registered as a:

Professional Engineer	96
Engineer in Training	57
Structural Engineer	5
Surveyor	<u>1</u>
	159 - 41.8% of those employed

QUESTION: Have you participated in any company sponsored professional or management programs?

Yes	231
No	139
No answer	11

QUESTION CONCERNING COMMUNITY PARTICIPATION

QUESTION: Have you held an office in any of the following organizations?

Church	111
Boy Scouts or Other Youth Groups	76
Service Clubs	55
Political	22
School Board	10
Other (no identified)	<u>74</u>
	348 - 91.3% of those employed

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